AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

We claim:

1. (Currently amended) An acetabular reamer comprising:

a body including a peripheral surface, the peripheral surface defined by a radius extending from an origin, said body defining an axis of rotation thereof, said body defining an end surface operably connected to peripheral surface and, said body defining a relief surface spaced from the axis of rotation and operably connected to the peripheral surface, wherein the peripheral surface is a truncated hemisphere, with its edges defined by the end surface and the relief surface;

a cutter operably associated with said body for reaming a portion of the acetabulum;

a driver connector directly coupled to the end surface; and

a support structure secured to the relief surface of said body, the support surface being spaced from the driver connector.

2. (Original) The acetabular reamer of claim 1, wherein the end surface of said body is generally planar and perpendicular to the axis of rotation of said body.

3. (Original) The acetabular reamer of claim 1, wherein said cutter and said body are integral with each other.

4. (Previously presented) The acetabular reamer of claim 1, wherein said body has a general form of a hollow, truncated hemisphere.

5. (Original) The acetabular reamer of claim 1, wherein the relief surface of said body is generally planar.

6. (Previously presented) The acetabular reamer of claim 1, wherein the relief surface of said body is generally planar and parallel to the axis of rotation of said body.

7. (Original) The acetabular reamer of claim 1, wherein said body defines a second relief surface spaced from the first mentioned relief surface of said body.

8. (Previously presented) The acetabular reamer of claim 7:

wherein the first mentioned relief surface of said body is generally planar and parallel to the axis of rotation of said body; and

wherein the second relief surface of said body is generally planar, spaced from, and generally parallel to the first mentioned relief surface of said body, the first mentioned relief surface and the second relief surface defining a width dimension therebetween, the width dimension being substantially smaller than twice the radius of said body.

9. (Original) The acetabular reamer of claim 7:

wherein the first mentioned relief surface of said body is generally planar; and

wherein the second relief surface of said body is generally planar and spaced from the first mentioned relief surface, the first mentioned relief surface and the second relief surface defining an included angle therebetween.

10. (Original) The acetabular reamer of claim 9, wherein the included angle is less than 90 degrees.

11. (Original) The acetabular reamer of claim 7, further comprising a second support structure, secured to the second relief surface.

12. (Original) The acetabular reamer of claim 11, further comprising a third support structure of said body, secured to the second support structure and to the first mentioned support structure for interconnecting the second support structure and to the first mentioned support structure.

13. (Original) The acetabular reamer of claim 1, further comprising a driver extending from said support structure.

14. (Previously presented) The acetabular reamer of claim 8, wherein the width dimension is less than 2/3 of the radius of the body.

15. (Original) The acetabular reamer of claim 1, wherein said support structure is integral with said body.

16. (Original) The acetabular reamer of claim 1, wherein said support structure comprises one of a rib, a gusset, a bar, a tube and a plate.

17. (Original) The acetabular reamer of claim 1, wherein said support structure extends substantially along the relief surface of said body.

18. (Currently amended) An acetabular reamer comprising:

a body including a peripheral surface, the peripheral surface of said body defined by a radius extending from an origin, said body defining an axis of rotation thereof, said body defining a generally planar end surface operably connected to peripheral surface of said body, said end surface being approximately perpendicular to the axis of rotation of said body, said body defining a generally planar first relief surface spaced from the axis of rotation and operably connected to peripheral surface, and, said body defining a generally planar second relief surface spaced from the axis of rotation of said body and from the first relief surface, the second relief surface operably connected to peripheral surface of said body, wherein the peripheral surface is a truncated hemisphere, with its edges defined by the end surface and the first and second relief surfaces;

a cutter operably associated with said body for reaming a portion of the acetabulum;

a driver connector directly coupled to the end surface; [[and]]

a first support structure secured to the first relief surface; and

a second support structure, secured to the second relief surface; wherein both the first support structure and second support structure are spaced from the driver connector.

19. (Original) The acetabular reamer of claim 18, wherein said cutter and said body are integral with each other.

20. (Original) The acetabular reamer of claim 18, wherein said body has the general form of a hollow, truncated hemisphere.

21. (Original) The acetabular reamer of claim 18, wherein the first relief surface of said body and the second relief surface of said body are generally parallel to the axis of rotation of said body, the second relief surface of said body being generally parallel to the first relief surface, the first relief surface and the second relief surface defining a width dimension therebetween, the width dimension being smaller that the radius of said body.

22. (Original) The acetabular reamer of claim 21, wherein the first relief surface and the second relief surface define an included angle therebetween.

23. (Original) The acetabular reamer of claim 22, wherein the included angle is less than 90 degrees.

24. (Original) The acetabular reamer of claim 18, further comprising a third support structure, secured to the second support structure and to the first support structure for interconnecting the second support structure and to the first support structure.

25. (Original) The acetabular reamer of claim 18, further comprising a driver extending from said support structure.

26. (Previously presented) The acetabular reamer of claim 21, wherein the width dimension is less than 2/3 of the radius of the body.

27. (Previously presented) The acetabular reamer of claim 18, wherein at least one of said first support structure and said second support structure is integral with said body.

28. (Previously presented) The acetabular reamer of claim 18, wherein at least one of said first support structure and said second support structure comprises one of a rib, a gusset, a bar, a tube and a plate.

29. (Previously presented) The acetabular reamer of claim 18, wherein at least one of said first support structure and said second support structure extends substantially along the relief surface.

30. (Currently amended) A rotatable tool for preparing a surface of a bone for implantation of a prosthesis for use in arthroplasty, said tool comprising:

a body including a peripheral surface, the peripheral surface defined by a radius extending from an origin, said body defining an axis of rotation thereof, said body defining an end surface operably connected to peripheral surface and, said body defining a relief surface spaced from the axis of rotation and operably connected to the peripheral surface, wherein the peripheral surface is a truncated hemisphere, with its edges defined by the end surface and the relief surface;

a cutter operably associated with said body for reaming a portion of the acetabulum;

a driver connector directly coupled to the end surface; and

a support structure secured to the relief surface, the support structure being spaced from the driver connector.

31. (Previously presented) The rotatable tool of claim 30:

wherein said body defines a second relief surface spaced from the first mentioned relief surface of said body;

wherein the first mentioned relief surface of said body is generally planar and parallel to the axis of rotation of said body; and

wherein the second relief surface is generally planar, spaced from, and generally parallel to the first mentioned relief surface, the first mentioned relief surface and the second relief surface defining a width dimension therebetween, the width dimension being substantially smaller that twice the radius of said body.

32. (Previously presented) The rotatable tool of claim 30:

wherein said body defines a second relief surface spaced from the first mentioned relief surface;

wherein the first mentioned relief surface of said body is generally planar; and

wherein the second relief surface is generally planar and spaced from the first mentioned relief surface, the first mentioned relief surface and the second relief surface defining an included angle therebetween.

33. (Previously presented) The rotatable tool of claim 32, wherein the included angle is less than 90 degrees.

34. (Currently amended) A method for implanting a prosthesis to perform joint arthroplasty on a patient, comprising:

~~Providing~~ utilizing a cutting tool including a body including a peripheral surface, the peripheral surface defined by a radius extending from an origin, the body defining an axis of rotation thereof, the body defining an end surface operably connected to peripheral surface and, the body defining a relief surface spaced from the axis of rotation and operably connected to the peripheral surface, wherein the peripheral surface is a truncated hemisphere, with its edges defined by the end surface and the relief surface, a cutter operably associated with said body for reaming a portion of the acetabulum, a driver connector directly coupled to the end surface, and a support structure secured to the relief surface, wherein the support structure is spaced from the driver connector;

cutting an incision in the patient;

using the cutting tool to prepare a cavity for the prosthesis; and

implanting the prosthesis in the patient.